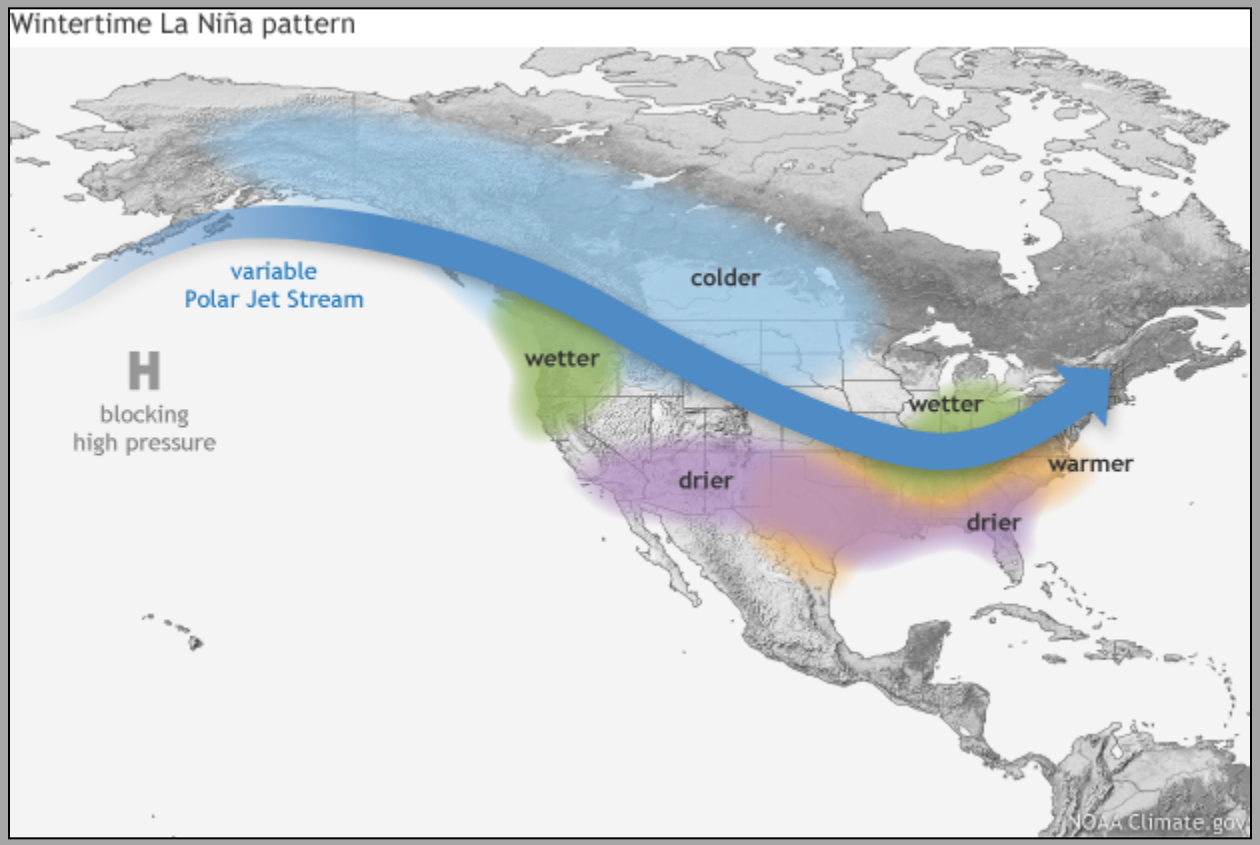
Climate and Drought Outlooks

Goodbye La Niña!



Typical Wintertime La Nina Pattern

Summary

ENSO Alert System Status: Final La Niña Advisory

ENSO-neutral conditions are present.*

Equatorial sea surface temperatures (SSTs) are near-average across the central and east-central Pacific. They are above-average in the eastern Pacific Ocean.

ENSO-neutral conditions have returned and are favored to continue through at least the Northern Hemisphere spring 2017.*

* Note: These statements are updated once a month (2nd Thursday of each month) in association with the ENSO Diagnostics Discussion, which can be found by clicking here.

Historical El Niño and La Niña Episodes Based on the ONI computed using ERSST.v4

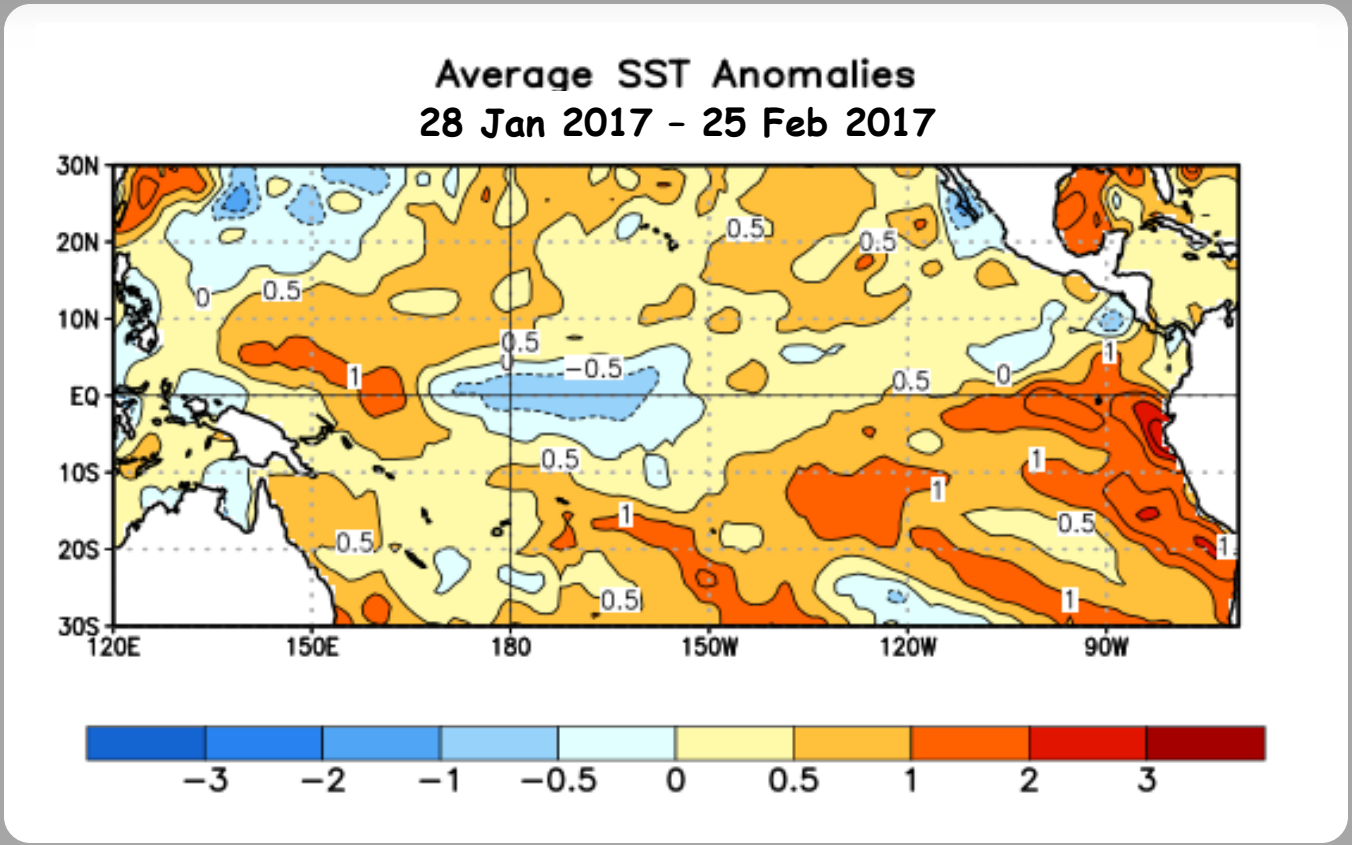
Recent Pacific warm (red) and cold (blue) periods based on a threshold of +/- 0.5 °C for the Oceanic Nino Index (ONI) [3 month running mean of ERSST.v4 SST anomalies in the Nino 3.4 region (5N-5S, 120-170W)]. For historical purposes, periods of below and above normal SSTs are colored in blue and red when the threshold is met for a minimum of 5 consecutive over-lapping seasons.

The ONI is one measure of the El Niño-Southern Oscillation, and other indices can confirm whether features consistent with a coupled ocean-atmosphere phenomenon accompanied these periods. The complete table going back to DJF 1950 can be found here.

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2004	0.3	0.3	0.2	0.1	0.2	0.3	0.5	0.6	0.7	0.7	0.6	0.7
2005	0.7	0.6	0.5	0.5	0.3	0.2	0.0	-0.1	0.0	-0.2	-0.5	-0.7
2006	-0.7	-0.6	-0.4	-0.2	0.0	0.0	0.1	0.3	0.5	0.7	0.9	0.9
2007	0.7	0.4	0.1	-0.1	-0.2	-0.3	-0.4	-0.6	-0.9	-1.1	-1.3	-1.3
2008	-1.4	-1.3	-1.1	-0.9	-0.7	-0.5	-0.4	-0.3	-0.3	-0.4	-0.6	-0.7
2009	-0.7	-0.6	-0.4	-0.1	0.2	0.4	0.5	0.5	0.6	0.9	1.1	1.3
2010	1.3	1.2	0.9	0.5	0.0	-0.4	-0.9	-1.2	-1.4	-1.5	-1.4	-1.4
2011	-1.3	-1.0	-0.7	-0.5	-0.4	-0.3	-0.3	-0.6	-0.8	-0.9	-1.0	-0.9
2012	-0.7	-0.5	-0.4	-0.4	-0.3	-0.1	0.1	0.3	0.3	0.3	0.1	-0.2
2013	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	-0.3	-0.3	-0.3
2014	-0.5	-0.5	-0.4	-0.2	-0.1	0.0	-0.1	0.0	0.1	0.4	0.5	0.6
2015	0.6	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.7	2.0	2.2	2.3
2016	2.2	2.0	1.6	1.1	0.6	0.1	-0.3	-0.6	-0.8	-0.8	-0.8	-0.7

SST Departures (ºC) in the Tropical Pacific During the Last Four Weeks

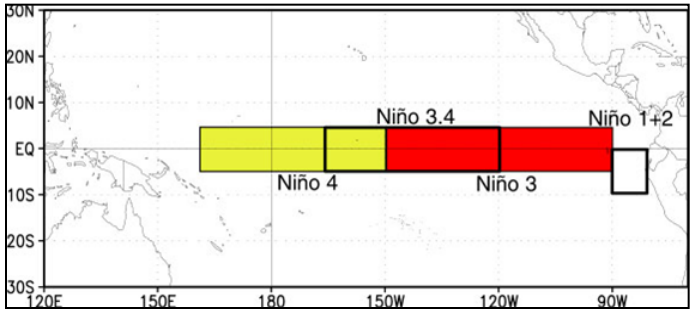
During the last four weeks, equatorial SSTs were near-to-below average across the central Pacific Ocean, and above-average across the western and eastern Pacific.

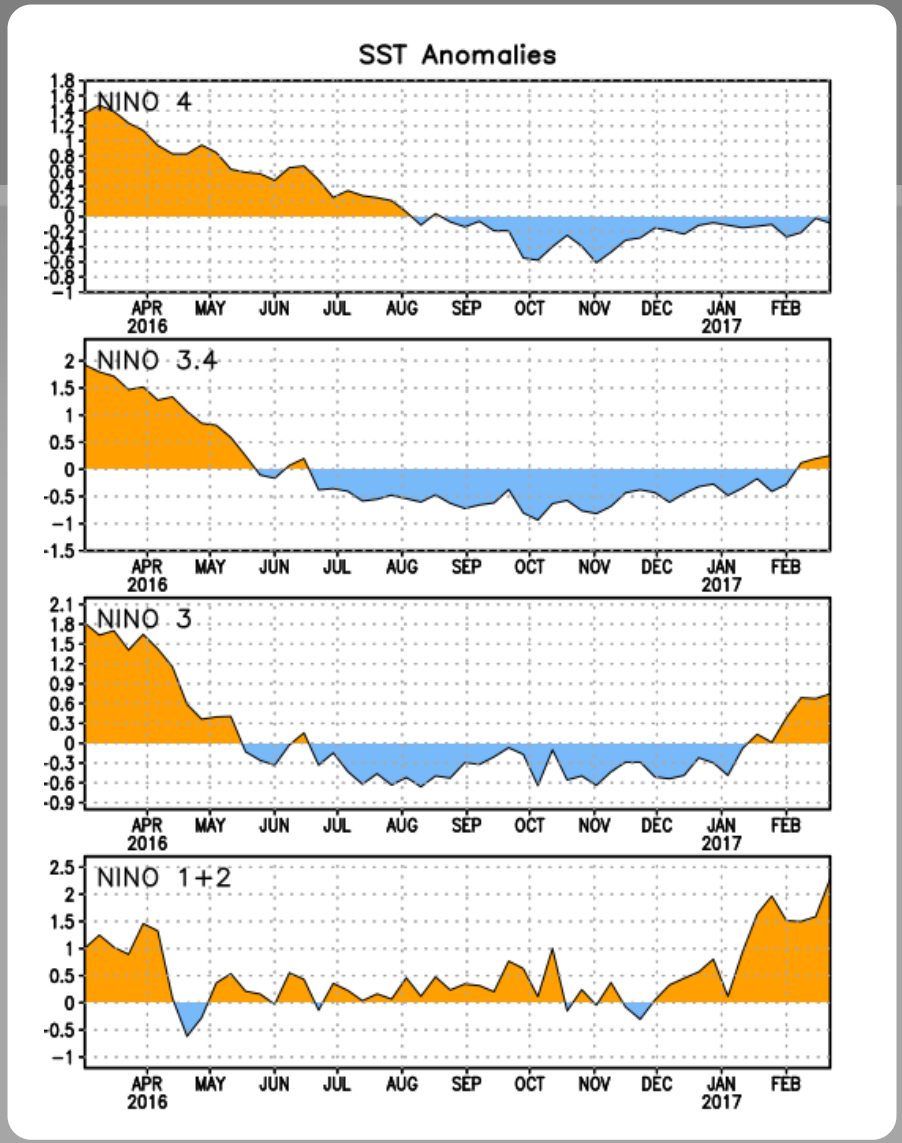


Niño Region SST Departures (ºC) Recent Evolution

The latest weekly SST departures are:

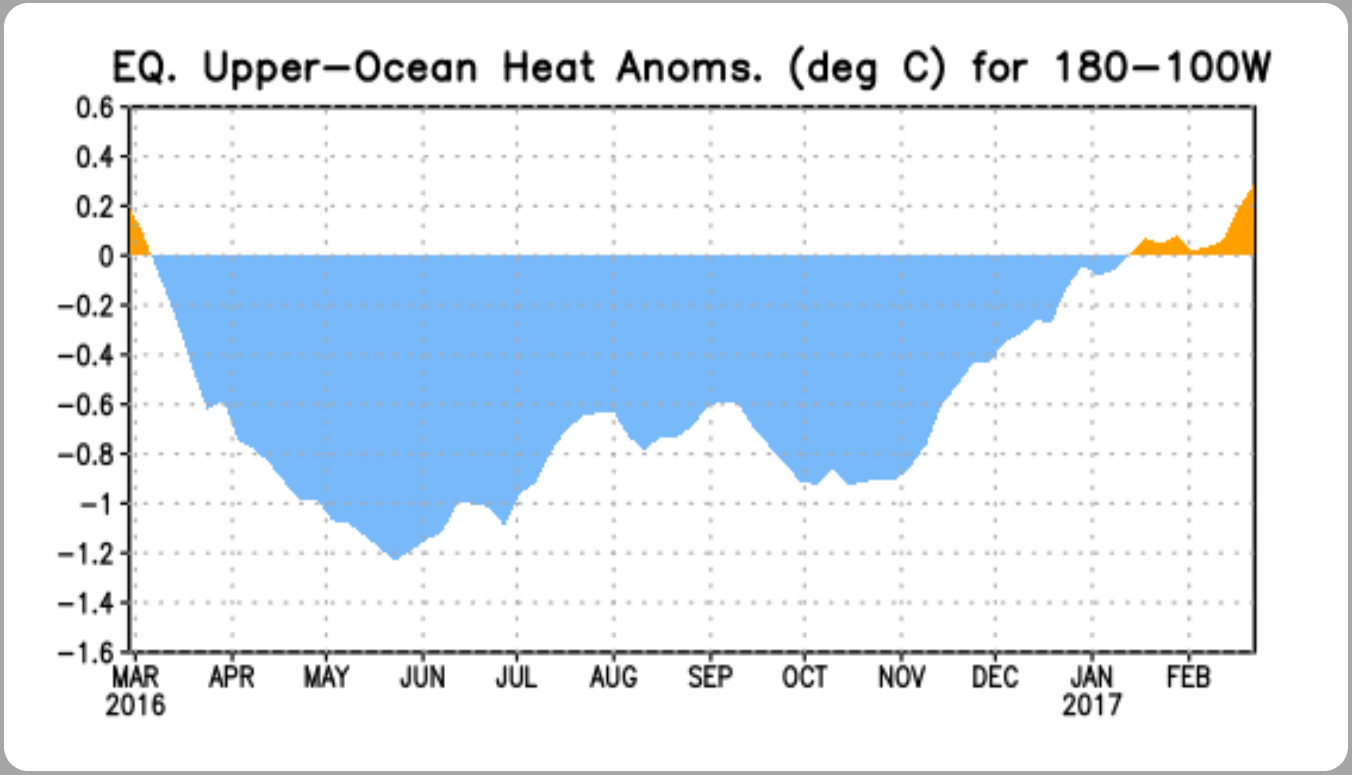
Niño 4	-0.1ºC
Niño 3.4	0.3ºC
Niño 3	0.7ºC
Niño 1+2	2.3ºC





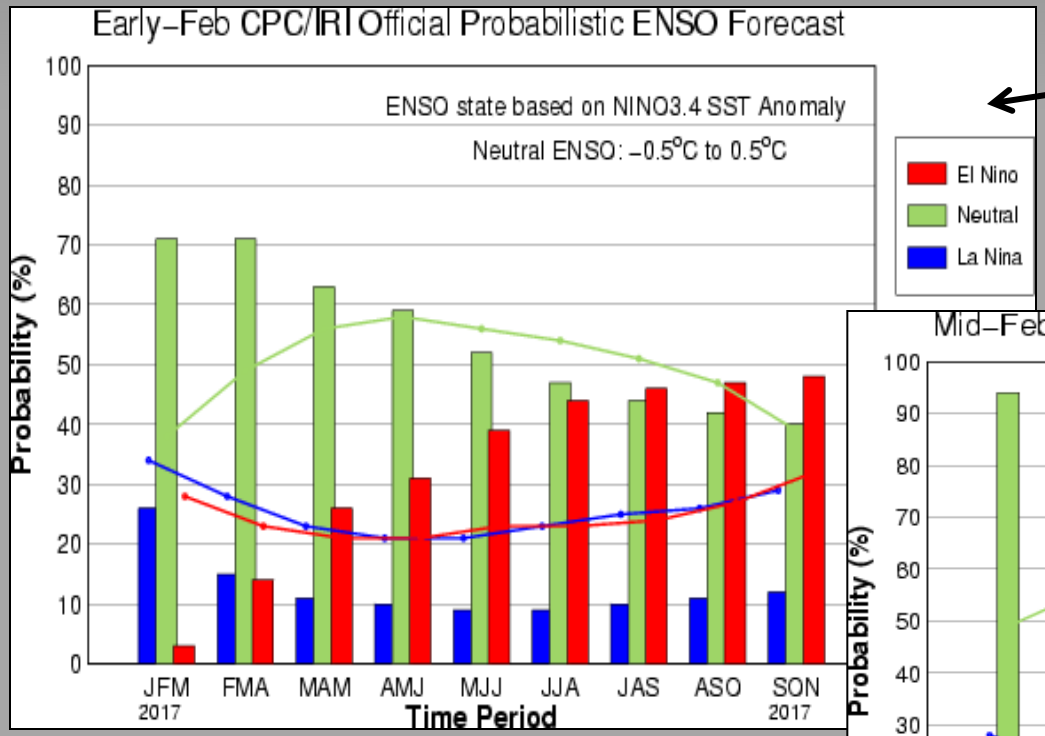
Central and Eastern Pacific Upper-Ocean (0-300 m) Weekly Average Temperature Anomalies

Negative subsurface temperature anomalies were present from March 2016 through December 2016. Since mid-January 2017, anomalies have become positive.

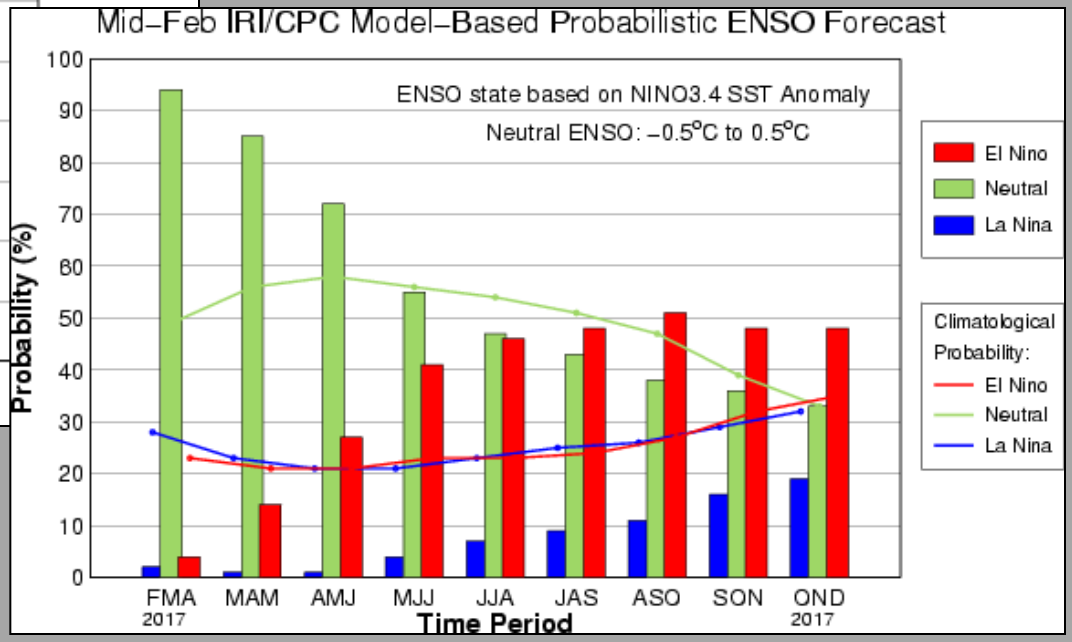


CPC/IRI Probabilistic ENSO Outlook

Updated: 16 February 2017



ENSO-neutral is favored through mid-2017, with a slight tilt toward El Niño (~50%) by September-October-November (SON) 2017.



IRI/CPC Pacific Niño 3.4 SST Model Outlook

Dynamical models favor El Niño during the early Northern Hemisphere summer 2017, while Statistical models favor ENSO-neutral through the Northern Hemisphere autumn 2017.

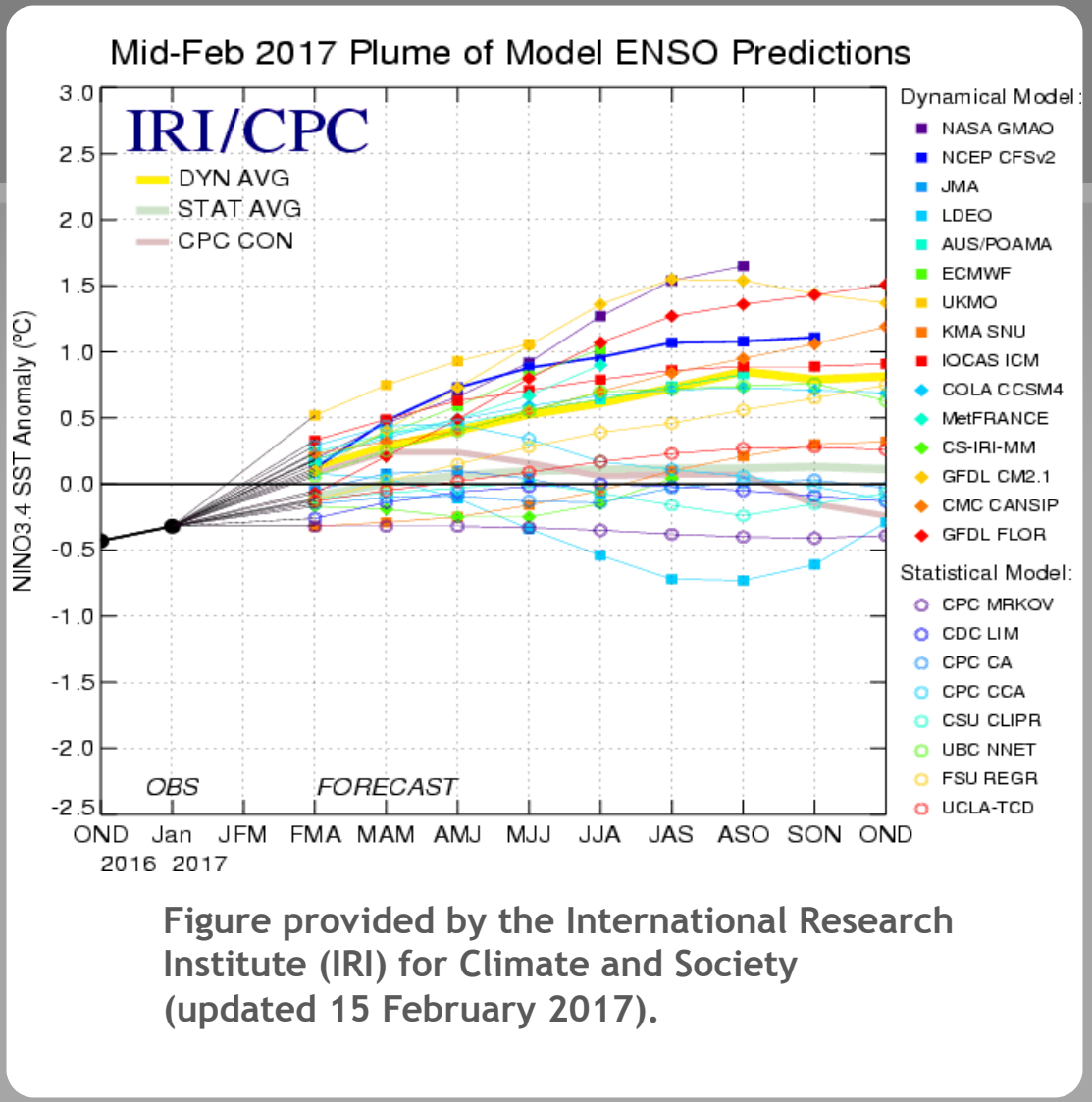
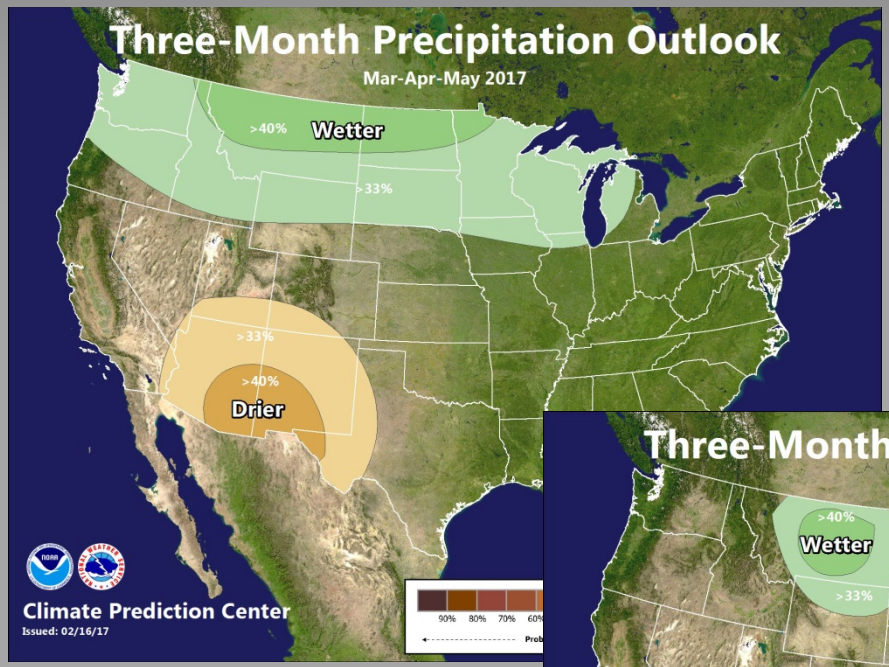
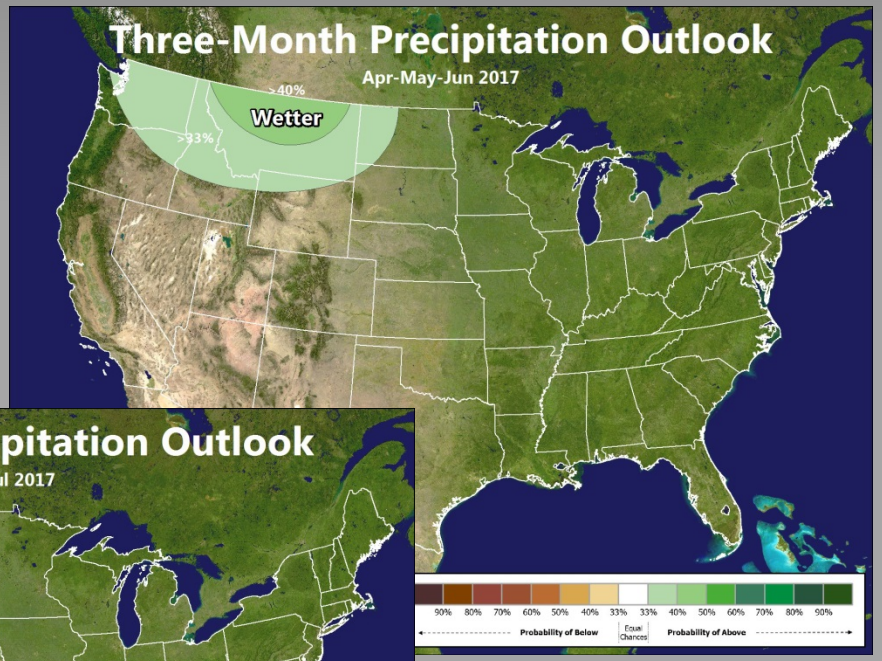


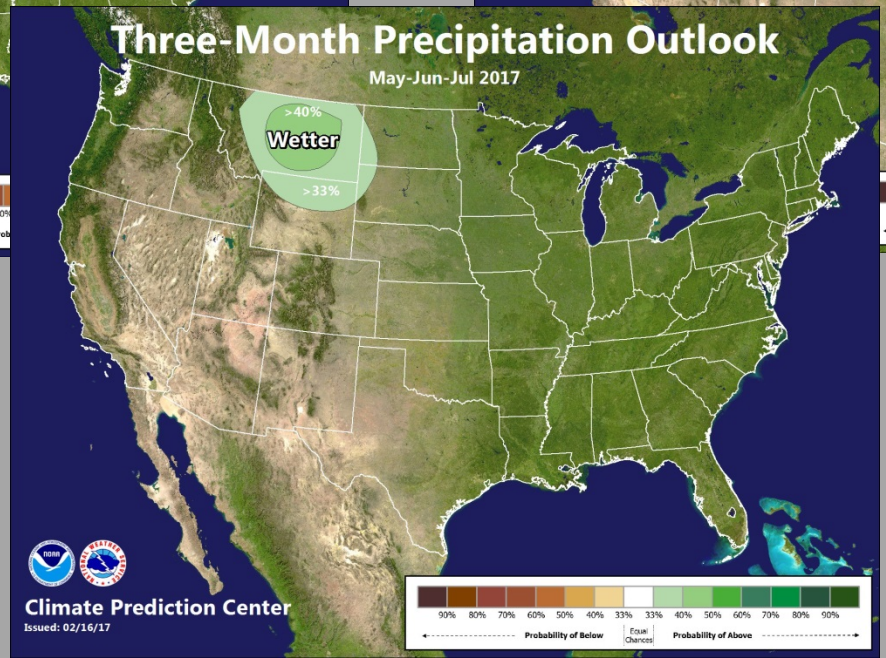
Figure provided by the International Research Institute (IRI) for Climate and Society (updated 15 February 2017).

U. S. Seasonal Outlooks

Precipitation



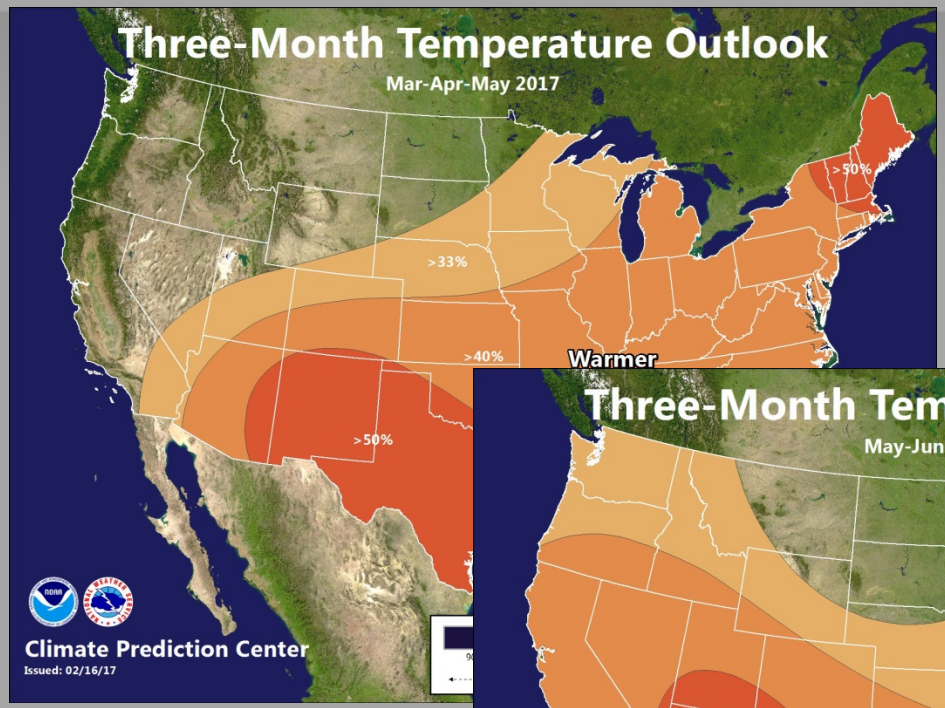


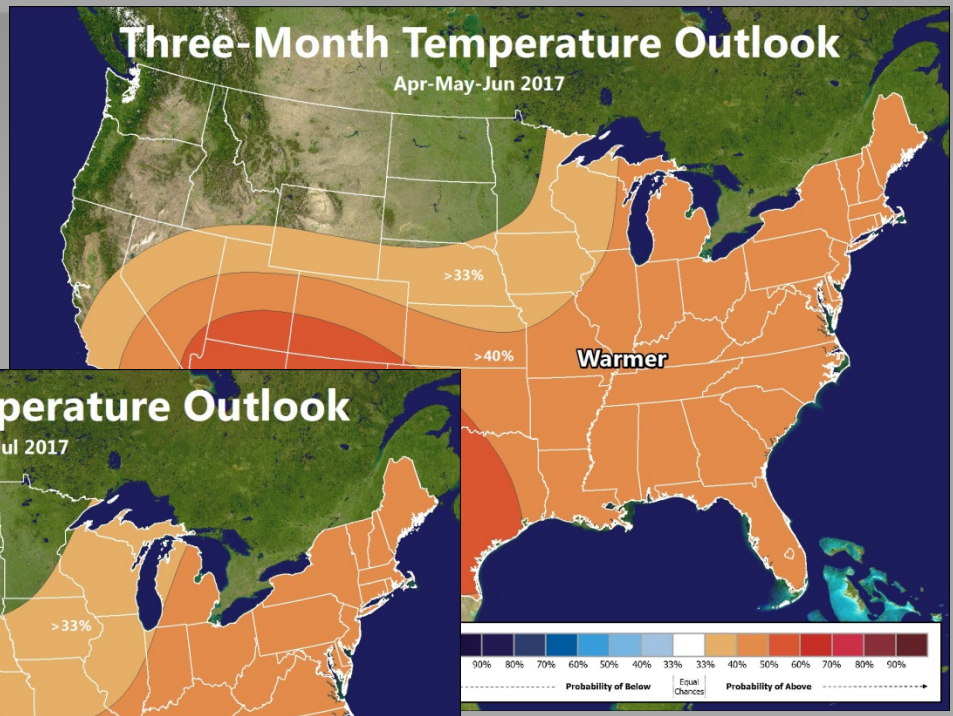


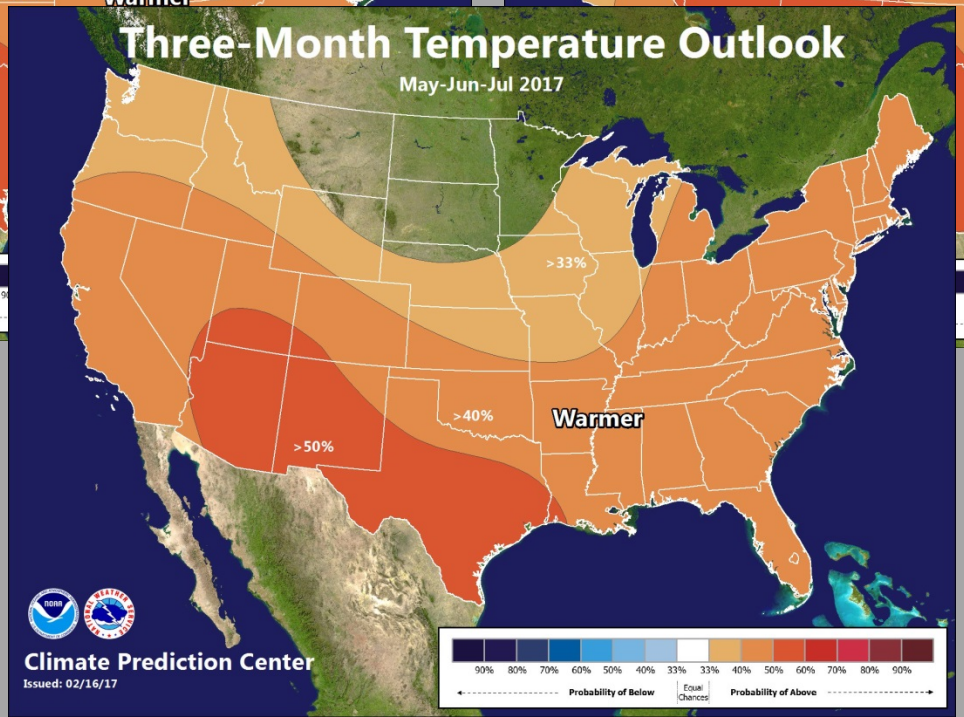
The seasonal outlooks combine the effects of long-term trends, soil moisture, and, when appropriate, ENSO.

U. S. Seasonal Outlooks

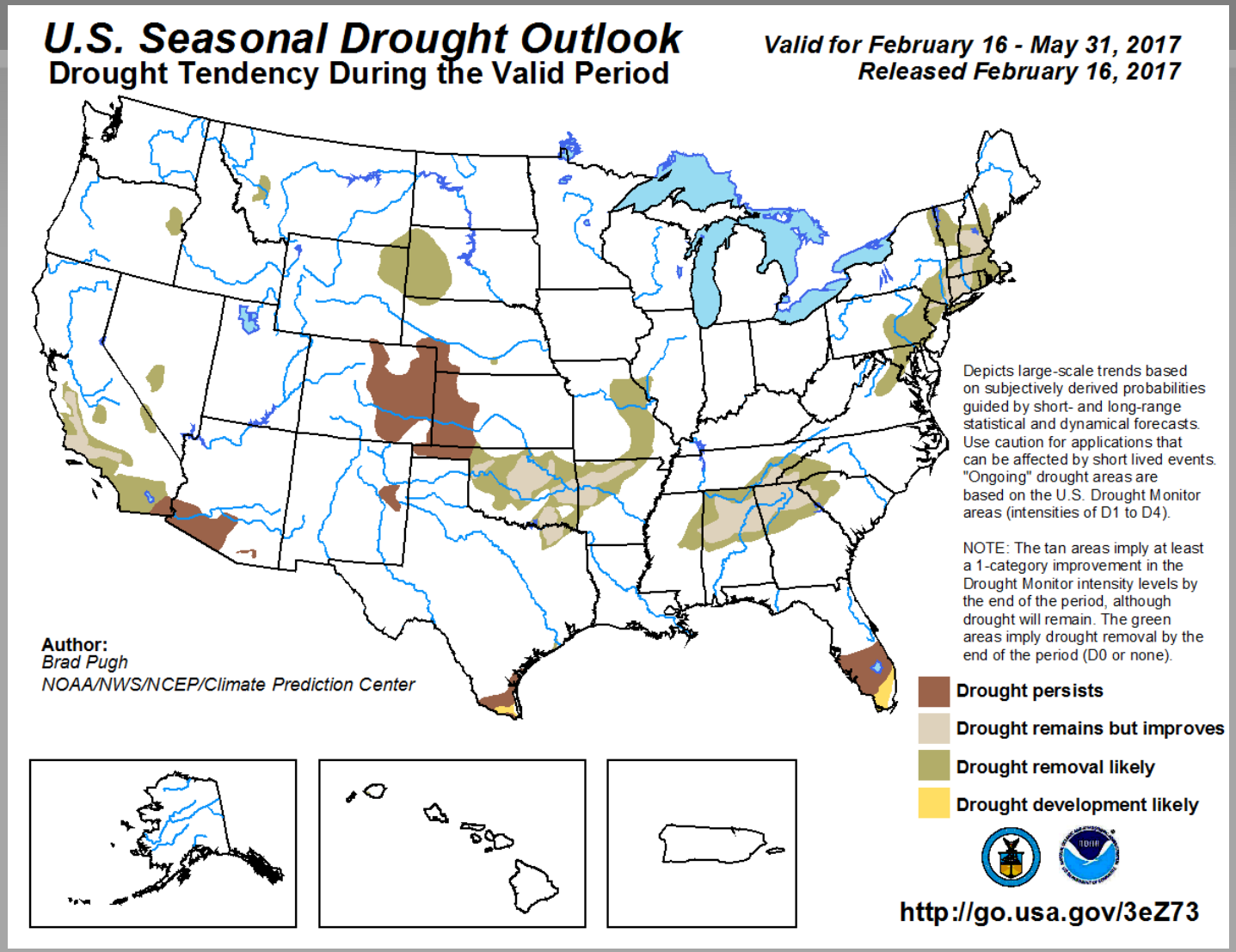
Temperature







U. S. Seasonal Drought Outlook



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NOAA Operational Definitions for El Niño and La Niña

El Niño: characterized by a positive ONI greater than or equal to +0.5°C.

La Niña: characterized by a negative ONI less than or equal to -0.5°C.

By historical standards, to be classified as a full-fledged El Niño or La Niña episode, these thresholds must be exceeded for a period of at least 5 consecutive overlapping 3-month seasons.

CPC considers El Niño or La Niña conditions to occur when the monthly Niño3.4 OISST departures meet or exceed +/- 0.5°C along with consistent atmospheric features. These anomalies must also be forecasted to persist for 3 consecutive months.